

Spirulina - From growth to nutritional product: A review

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Abstract

Background

Spirulina is multicellular and filamentous [cyanobacteria](#) that have achieved a considerable popularity in the health sector, food industry and aquacultures. It develops and grows in water, can be harvested and processed easily. It has very high content of macro and [micronutrients](#), [essential amino acids](#), proteins, lipids, vitamins, minerals and [anti-oxidants](#). *Spirulina* is considered as a complete food supplement to fight against malnutritional deficiencies in developing countries. *Spirulina* is deemed safe for human consumption as evident by its long history of food use and latest scientific findings. In recent years, *Spirulina* has gathered enormous attention from research fraternity as well as industries as a flourishing source of [nutraceutical](#) and pharmaceuticals.

Scope and approach

The primary objective of this paper is to review the utilization of *Spirulina* as a [dietary supplement](#) in the food industry. In the present work, the three main area of *Spirulina* research: growth, harvesting and potential application are presented.

Key findings and conclusion

The important growth parameters have been studied to enhance *Spirulina* biomass productivity qualitatively and quantitatively. This review provides useful information on commercially viable technology for *Spirulina* cultivation. Mass cultivation and Innovative formulations are further needed to fortify conventional foods with *Spirulina* based protein system.

Keywords

Spirulina; Pharmaceutical; Nutritional use; Dietary supplement; Open pond; PBR